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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,986	12/19/2005	Chiew Ying Chow	94602	4265
24628	7590	12/12/2007		
WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606			EXAMINER CHOWDHURY, AFROZA Y	
			ART UNIT 2629	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/538,986

**Applicant(s)**

CHOW, CHIEW YING

**Examiner**

Afroza Y. Chowdhury

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/15/2006</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**virtual keyboard**” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Regarding claim 24, lines 1-2, "**virtual keyboard**" is not described in the specification.

### ***Claim Objections***

4. Claim 3 is objected to because of the following informalities: a "**table**". Claims cannot contain table. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 16, 20-23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by **Keetch et al.** (GB 2358948).

As to claims 1, 16, and 22, Keetch et al. discloses a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).

As to claims 2 and 23, Keetch et al. teaches a method wherein the numeric keypad includes any one of a telephone keypad layout, a calculator keypad layout and a computer keyboard's numeric keys array (fig. 1, col. page 9, lines 11-15).

As to claim 20, Keetch et al. discloses a method wherein the record is in the form of a computer-implemented storage which is retrievable for any one or combination of the functions of output to a visual display; animation replay of the input's spatial arrangement; test a user for the correct input; and incorporate said record into a

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database, hence expanding said database for enhanced future implementation (page 7, line 5 – page 8, line 9).

As to claim 21, Keetch et al. teaches a method wherein more than one mnemonic device is generated and the spatial arrangement of inputting each of said mnemonic devices is weighted according to pre-selected input pattern preference, and wherein said mnemonic devices are then arranged according to said weighted preference for a user's selection (page 1, lines 9-20, page 7, lines 5-15).

Claim 26 is rejected the same as claim 16 above.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948).

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As to claim 17, Keetch et al. teaches a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).

Keetch et al does not specifically teach a method wherein the input record means is embodied as a sheet provided with the keypad layout upon which the spatial arrangement in which the sequence of keys being pressed in respect of the mnemonic device being inputted may be practiced and recorded.

However, it is obvious for a mnemonic device where the input record means is embodied as a sheet provided with the keypad layout upon which the spatial arrangement in which the sequence of keys being pressed in respect of the mnemonic device being inputted may be practiced and recorded.

As to claim 18, Keetch et al. discloses a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).

Keetch et al does not explicitly teach a method where the input record means is a mat provided with the keypad layout upon which the spatial arrangement comprising the sequence of keys being pressed in respect of the mnemonic device being inputted may be performed with footsteps of the user.

However, it is obvious for a mnemonic device where the input record means is a mat provided with the keypad layout upon which the spatial arrangement comprising the

sequence of keys being pressed in respect of the mnemonic device being inputted may be performed with footsteps of the user.

As to claim 19, Keetch et al. teaches a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).

Keetch et al does not teach a method wherein the sheet is comprised of a sticker dispensable from a stack in convenient size for manually registering the input's spatial arrangement and for sticking onto a page containing educational or instructional materials.

However, it is obvious for a mnemonic device where the sheet is comprised of a sticker dispensable from a stack in convenient size for manually registering the input's spatial arrangement and for sticking onto a page containing educational or instructional materials.

9. Claims 6-15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948) in view of **Krasney** (US Pub. 2003/0068604).

As to claim 6, Keetch et al. discloses a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).



Keetch et al. does not explicitly teach a method for generating a mnemonic device from a list of keywords to be memorized and inputting said generated mnemonic device.

Krasney discloses a method for generating a mnemonic device from a list of keywords to be memorized and inputting said generated mnemonic device (abstract, fig. 2, page 3, [0033]).

Therefore, it is obvious to one skill in the art at the time of the invention was made to combine Kresney's mnemonic generator with the keypad device of Keetch et al. to make a numeric device with a keypad where the spatial arrangement of the input is recorded.

As to claim 7, Keetch et al. teaches a method for inputting a piece of information, including a mnemonic device, on a numeric keypad wherein the spatial arrangement of the input is recorded (fig. 1, abstract, col. page 9, lines 11-15).

Keetch et al. does not does not specifically teach the steps of generating a mnemonic device.

Kresney teaches the steps of generating an acrostic mnemonic device (page 3, [0035]).

Therefore, it is obvious to one skill in the art at the time of the invention was made to combine Kresney's acrostic mnemonic device with the keypad device of Keetch et al. to make a numeric device wherein the mnemonic device is generated by the steps of: (i) arranging the keywords to be memorized in a list; (ii) short-listing said

keyword list by the first alphabet of each keyword; (iii) rearranging said first alphabets to combine in different permutations; (iv) choosing at least one combination of the alphabets that forms a word meaningful to a user; (v) user inputs word onto a numeric keypad and record the spatial arrangement of the input.

As to claim 8, Kresney teaches a method according where the word formed of the alphabets' combination includes an acronym (page 1 [0005]).

As to claim 9, Kresney teaches a method wherein a plurality of the alphabets' combination comprises words and a word most meaningful to the user is chosen (page 1 [0005]), abstract).

As to claim 10, Keetch et al. (as modified by Kresney) does not specifically teach a method wherein the list of words formed of the permutation of alphabets is crosschecked against a database of dictionary words whereby words having meaning are short-listed for the user to choose.

Keetch et al. (as modified by Kresney) teaches a database of dictionary words and generating acrostic mnemonic sentences (page 5, [0051], [0053], in Kresney).

However, it is obvious for the mnemonics device of Keetch et al. (as modified by Kresney) to be crosschecked against a database of dictionary words in order to generate meaningful sentences.

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As to claim 11, Keetch et al. (as modified by Kresney) does not a method wherein the list of words formed of the permutation of alphabets is grouped into at least two groups to form at least two words.

However, it is a design choice to have a mnemonic device wherein the list of words formed of the permutation of alphabets is grouped into at least two groups to form at least two words.

As to claim 12, Kresney teaches a method wherein the mnemonic device generated in the form an acrostic (abstract).

Claim 13 is rejected the same as claim 10 above.

As to claim 14, Krasney teaches a method wherein the generated acrostics, including words, which are new to the database, are incorporated therein, hence expanding said database for future crosschecking (page 5, [0053]).

As to claim 15, Keetch et al. (as modified by Kresney) teaches a method where the database is implemented in a computer (page 5, [0047]-[0049], in Kresney).

Keetch et al. . (as modified by Kresney) does not explicitly teach whether the crosschecking engine is implemented in a computer.

However, it is obvious that the crosschecking engine is implemented in a computer.

Claim 25 is rejected the same as claim 6 above.

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948) in view of **Mager** (US Pub. 2003/0048894).

As to claim 3, Keetch et al. discloses a numeric keypad that includes a telephone keypad layout (fig. 1, col. page 9, lines 11-15).

Keetch et al. does not specifically teach the mode of dual tone multi-frequency (DTMF).

Mager teaches a mode for generating dual tone multi-frequency (page 1., [0004], page 3, [0045]).

Therefore, it is obvious to one skill in the art at the time the invention was made to include Mager's idea of using mode for generating DNFT into the keypad device of Keetch et al. to make the numeric keypad in order to provide the device with a mode for entering alphanumeric characters in addition to the numeric mode for generating dual tone multi-frequency (DTMF) signal.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948) in view of **Gill et al.** (US Patent 6,847,310).

As to claim 4, Keetch et al. teaches a numeric keypad that includes a telephone keypad layout (fig. 1, col. page 9, lines 11-15).

Keetch et al. does not explicitly teaches a method wherein any one of the numeric keypad of the calculator and computer keyboard's numeric keys array includes a user-executable program enabling the layout to be changed to that of a telephone keypad layout.

Gill et al. teaches a keyboard that includes numerical keys arrange in the format used in telephone (abstract, col. 1, lines 26-36).

Therefore, it is obvious to one skill in the art at the time the invention was made to combine the idea of using keypad that can be used for a telephone with the keypad device of Keetch et al. to make the numeric keypad where the keyboard's numeric keys array includes a user-executable program enabling the layout to be changed to that of a telephone keypad layout.

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948) in view of **Hsiao** (US Patent 5,619,563).

AS to claim 5, Keetch et al. discloses a numeric keypad that includes a telephone keypad layout (fig. 1, col. page 9, lines 11-15).

Keetch et al. does not a method wherein the numeric keypad is provided with a mode for entering radicals of an East Asian language script, including any one of Chinese, Japanese and Korean.

Hsiao teaches a method wherein the numeric keypad is provided with a mode for entering radicals of an East Asian language script, including any one of Chinese, Japanese and Korean (fig 1-4, col. 1, lines 40-45).

Therefore, it is obvious to one skill in the art at the time of the invention was made to incorporate the idea of Hsiao's entering radicals of Chinese into the the keypad device of Keetch et al. to make a keypad with a mode for entering radicals of an East Asian language script, including any one of Chinese, Japanese and Korean for user's convenience.

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Keetch et al.** (GB 2358948) in view of **Brown** (GB 2357164).

As to claim 24, Keetch et al. discloses a numeric keypad that includes a telephone keypad layout (fig. 1, col. page 9, lines 11-15).

Keetch et al does not teach an apparatus including means for implementing a virtual keyboard.

Brown teaches a virtual keyboard that is provided on screen.

Therefore, it is obvious to one skill in the art at the time of the invention was made to include Brown's virtual keyboard with the keypad apparatus of Keetch et al. to make an mnemonic device with touch screen.

***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afroza Y. Chowdhury whose telephone number is 571-270-1543. The examiner can normally be reached on 7:30-5:00 EST, 5/4/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-272-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AC  
12/08/2007

  
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SUPERVISORY PATENT EXAMINER